

ABSTRACT OF THE DISCLOSURE

INSTRUMENT AND METHOD TO FACILITATE AND IMPROVE THE  
TIMING ALIGNMENT OF A PET SCANNER

A system for providing the timing alignment for a scanner. The system comprises a removable source and detector assembly which is placed near the centre of the scanner when in use. The source comprises a long-lived positron emitting radioactive source. The radioactive source is in close contact with a fast plastic scintillator or other means of detecting the ionization due to positron decay. A method for reading out the precise time at which the surrounding medium detects the ionization due to positron decay. A means of using this time as a reference clock unto which the detectors in the scanner can be aligned.